

Claims

1. A method for indicating a terminal's (MS) location in a telecommunications system comprising:

a core network (CN); and

5 an access network (RAN) comprising a first network controller, which at least temporarily acts as the terminal's serving network controller (SRNC), for reporting the terminal's location to the core network, and a second network controller, which at least temporarily acts as the terminal's drift network controller (DRNC), for maintaining a connection with the terminal;
10 wherein

there is a first set of predetermined criteria for sending information about the terminal's (MS) location to the core network (CN); and

in response to fulfilment of at least one criterion in the first set, the terminal (MS) sends to the second network controller (DRNC) location information (4-1, 5-1) on the basis of which the terminal's location can be determined; and the second network controller (DRNC) forwards the location information to the first network controller (SRNC) for reporting to the core network (CN);

characterized in that

20 there is a second set of at least one predetermined criterion for transforming the location information;

the first network controller (SRNC) checks whether at least one criterion in the second set is fulfilled; and

in response to fulfilment of at least one criterion in the second set,
25 the first network controller (SRNC) sends transformed information (4-2, 5-2) about the terminal's location to the core network (CN).

2. A method according to claim 1, characterized in that in response to terminating the last connection-oriented connection with the terminal, the first network controller (SRNC) reports the terminal's correct location
30 to the core network (CN).

3. A method according to claim 1 or 2, characterized in that the information about the terminal's (MS) location indicates a location which is controlled by the first network controller (SRNC) and which is part of the terminal's active set, if such a location exists.

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4. A method according to claim 3, characterized in that if the terminal's active set does not comprise a location which is controlled by the first network controller (SRNC), the information about the terminal's (MS) location indicates a virtual location, which is not controlled by either of said network controllers.

5. A method according to claim 3, characterized in that if the terminal's active set does not comprise a location which is controlled by the first network controller (SRNC), the information about the terminal's (MS) location indicates the last location which is controlled by the first network controller and which has been part of the terminal's active set.

6. A method according to claim 3, characterized in that if the terminal's active set does not comprise a location which is controlled by the first network controller (SRNC), said information about the terminal's (MS) location indicates a location which is at least partially controlled by the first network controller.

7. A method according to any one of the preceding claims, characterized in that the information about the terminal's (MS) location indicates a location the location information of which the terminal received last.

8. A method according to any one of the preceding claims, characterized in that if the terminal's (MS) active set does not comprise a location controlled by the first network controller (SRNC), the information about the terminal's (MS) location indicates a location controlled by the second network controller (DRNC).

9. A method according to any one of the preceding claims, characterized in that said information about the terminal's (MS) location indicates at least one cell identifier, routing area identifier or location area identifier.

10. A method according to any one of the preceding claims, characterized in that said first set of criteria comprises a change of the terminal's location, activation of a PDP context for the terminal and expiry of a recurring period of time.

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11. A method according to any one of the preceding claims, characterized in that

the first and the second network controller (RNC1, RNC2) are associated, respectively, with a first and a second switching element (SGSN1, SGSN2) for maintaining subscription information related to the terminal (MS);
5 and

information about the terminal's location is received by the first switching element (SGSN1) sends (5-4) information about the terminal's location to the second switching element (SGSN2) without a separate request.

12. A method according to claim 11, characterized in that
10 said information about the terminal's location comprises the terminal's Packet Data Protocol and/or Mobility Management context.

13. A method according to claim 11 or 12, characterized in that each of the first and the second switching element (SGSN1, SGSN2) is
15 substantially an SGSN node, a Mobile services Switching Centre or a combination of both.

14. A method according to any one of the preceding claims, characterized in that said terminal is a mobile station, said access network is a radio access network and said network controller is a radio network controller.
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15. A first network controller for supporting a terminal (MS) in a telecommunications system which comprises a core network (CN) and an access network (RAN);

wherein said first network controller is adapted to act, at least temporarily, as the terminal's serving network controller (SRNC) in said access network (RAN), for reporting the terminal's location to the core network (CN);
25 and

the first network controller (SRNC) is adapted to receive location information from a drift network controller (DRNC) and to report it to the core network (CN) for determining the terminal's (MS) location;
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characterized in that

the first network controller (SRNC) is adapted to transform said information about the terminal's location before reporting it to the core network (CN).

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